

THE STUDENT MANAGEMENT SYSTEM FS

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Executive summary

FS is a system for students and studies management, used in higher education in Norway. Annually FS administers roughly 95% of upper secondary studies. By using FS, one can administer students, applicants and studies at all levels of higher education. FS contains 14 modules, among which are admission, teaching and evaluations.

The FS Consortium was established in 1999, based on an agreement between cooperating institutions with the goal to develop, maintain and operate the study management system FS.

The organisation of FS is being assessed, and coordination with other national systems like the national admission system and Diploma Bank among others, will be evaluated.

The most important future scenarios are further digitalisation of administrative processes, including development of new solutions for national recognition registries and Diploma bank.

In regard to Digital Student Data Portability, FS will be a source system where quality assured information about the students originates, and where this information is maintained. FS will be a source for national collections of services delivering information, both for active students and present students. One of the services will be the Diploma Bank, which is about to be planned. Based on sources like FS the Diploma Bank will deliver information about a person's results.

For many years now FS has participated in international standardisation work, to ease the processes regarding student mobility. The results of this work and other efforts can now be used to take a step forward and interconnect systems to share data. In this cooperation we should have great ambitions, but we must accept the time it takes to accomplish the work.

For more information about FS, see <https://fellesstudentsystem.no>

FS – a Student Management System

FS is a system for students and studies management, used in higher education in Norway. Annually FS administers roughly 95% of upper secondary studies. The system has been developed by a section of the University centre for information technology at the University of Oslo, called SUN (section for development of common information systems). SUN also develops systems for admission and documentation of research for higher education in Norway. By using FS, one can administer students, applicants and studies at all levels of higher education. FS contains 14 modules, among which are admission, teaching and evaluations. For more information, see <https://fellesstudentsystem.no>

The first version of FS was launched in 1996, and since then, the system has been continuously developed and changed. From being a self-dependent system, it has become the most mission critical system for the individual educational institution, with integration to a number of systems.

University and university college administration embraces an enormous area. Therefore as a supporting system, FS is necessarily a large and complex system. As a comprehensive system, it needs to cover the needs of all kind of institutions both, large and small, public as well as private

The system consists of a FS client and several attendant applications. The FS client is a tool for study administrative users including over 615 user windows and 500 reports and executable routines. These are divided thematically into 14 modules (plus Reporting): FS is divided into a series of modules:

- **Enrolment:** This is the module where all admissions procedural work is done, both local admissions and the national admissions through NUCAS.
- **Recognition:** This module is used to register and process results from external exams from other institutions, specific recognition of in-house courses or specific recognition of part-time studies.
- **Program Student:** This module is used to administer a student's right to study in relationship to a given study program.
- **Student Exchange:** This module is used for registering and administering an institution's student exchange agreements with institutions from other countries.
- **Teaching:** This module gives institutions the possibility to administer courses and lectures for the present or coming semester.
- **Exam:** This module is used for planning and administering examinations and evaluation of student work.
- **Payment:** This module is used for collection and administering student fees.
- **PhD:** The PhD module is a continuation of an earlier stand-alone system. All procedural work for doctor students is done in this module.
- **Term Registration:** This module is primarily used to prepare the Student Web for the coming semester. Institutions can make eventual local adjustments and specify deadlines for given semesters here.
- **Scholarship:** The stipend module is used to administer and manage student stipends, dealing with distribution of endowment funds based on given criteria.
- **Qualifications:** This module is used to work with finished studies and achieved degrees, qualifications, as well as to produce diplomas, certificates and Diploma Supplements.

- **Further Education:** This module is used for administering continuing and further education courses and programs. Applicants apply through the Further Education Web (EVUWeb).
- **Courses and Programs:** This module is used by the institutions to build up their study structure, consisting of courses, study programs and individual education plans. It is a central and extensive module that is the basis for all further work in FS.
- **Code Work:** All of the common code-work for FS is found in this module, where institutions also can make local code adjustments.
- **Reporting:** Presently FS is used to report to a number of Norwegian institutions connected to the educational sector (DBH, Lånekassa, SSB, BIBSYS, NIFU and Utdanning.no.). Whereas certain reporting is done on a daily basis, other reports are sent in on a biannual basis.

All modules are connected and to a certain degree dependent on each other.

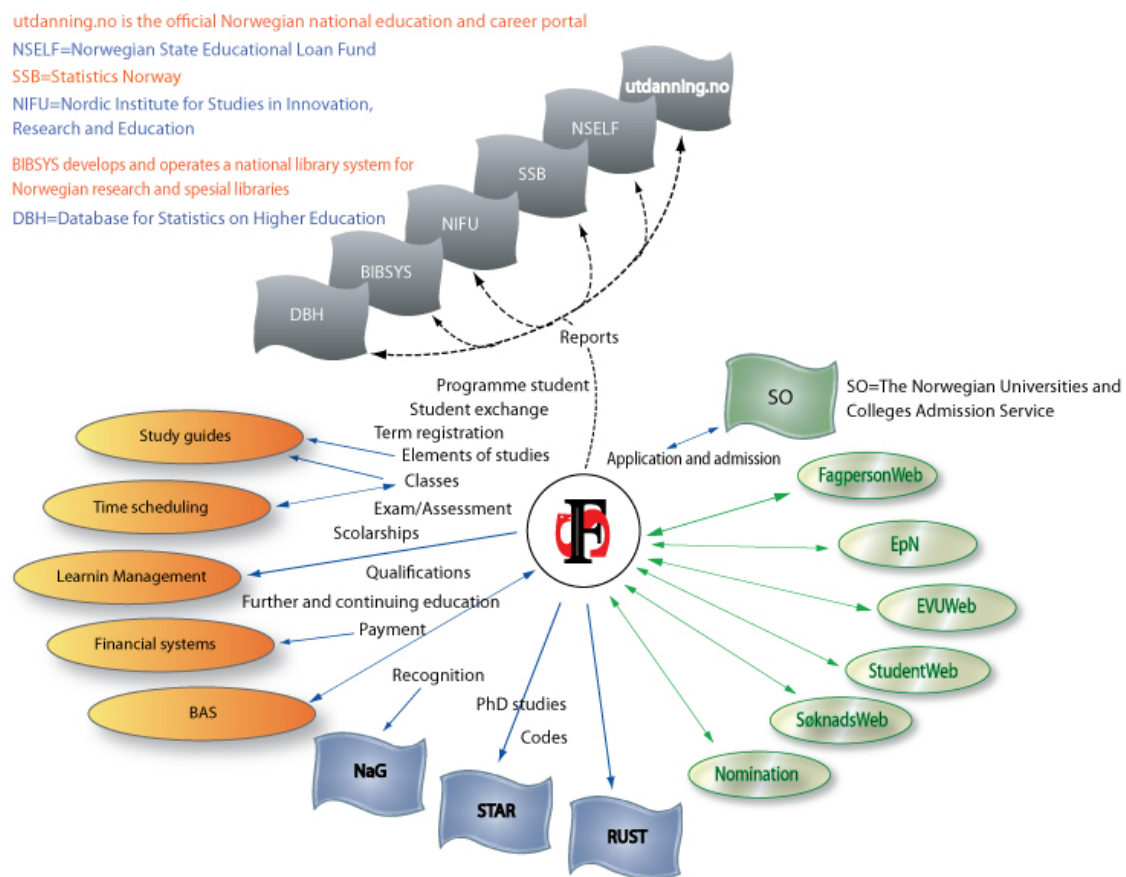


Figure 1: FS – overall system

In addition to the FS client, FS consists of the following applications:

- **StudentWeb** is a web application for students. It allows students access to their personal student data and to execute certain administrative routines. They can, for example, update their individual study plan, view their exam results, view data on eventual practicum placement as well as follow data exchange with the State Educational Loan Fund (Statens Lånekasse).

- **Application Web** is a web application where students can apply to studies not administered by NUCAS, as for example master programs. Application Web also allows for the screening of qualified foreign students and the uploading of necessary documentation.
- **Nomination** is a web application that is most commonly used in combination with the Application Web. It gives foreign institutions the possibility to nominate applicants to studies at Norwegian institutions. Such nominated applicants can then apply to study programs through the Application Web.
- **Further Education Web** is a web application for applying to further and continuing education or courses.
- **Teachers Web** is a web application that allows teachers to do necessary study administrative procedures and routines via the net (electronically). The application also functions as a supporting tool for course planning.
- **Course Planning on the Net** is a web application used as a tool in course/study planning. Courses can be retrieved from FS or created in the web application. In a controlled work process they are made available for editing and planning for teachers and administrative staff without changing the production data.
- **FS Web Services** is a common web service interface to facilitate integration between an institution's FS base and other systems. The service includes, among other things, integration of the institution's web pages, alumni data, user administrative systems, economy systems and e-learning systems.
- **STAR** is a data warehouse with study data designed to accumulate data and produce reports relevant for management and planning, such as reports on credits per student per year.

FS has an administrative responsibility for the newly developed RUST system (register for banned students). With the help of RUST, institutions will be able to keep each other informed about students who have been banned from studying in Norway due to cheating, false documentation and other unseemly academic conduct.

In 2012 FS also made the specification of a future national diploma bank.

FS Organisation

FS was originally developed as an administrative system for Norway's national universities, with colleges and other institutions offering higher education following after. It is now available for private institutions as well. In 2013, 54 institutions are using FS, including all state funded universities and colleges, police- and military colleges and a number of private colleges.

All Norwegian institutions that are bound by the statutes concerning universities and colleges (Lov om universiteter og høyskoler) can apply to join the FS Consortium (Samarbeidstiltaket FS) and implement FS under a licensed agreement. Institutions using FS are obligated to take part in the further development and improvement of the system. Feedback from institutions and governmental departments is coordinated by the Samarbeidstiltaket FS. This cooperation ensures that FS is a dynamic system that responds to current developments in the sector quickly and effectively.

The FS Consortium yearly allocates funding of about 20 man-years for development and 3.5 man-years for the FS Secretariat.

The FS board is in charge of both prioritizing and overseeing FS through budget and year plans. In addition, the institutions actively co-operate in the FS Planning Group, Expert Groups and user participation development.

The FS Consortium arranges the yearly FS User Forum, which is a seminar with around 170 participants, as well as a yearly Social Network meeting for all 54 institutional FS contacts.

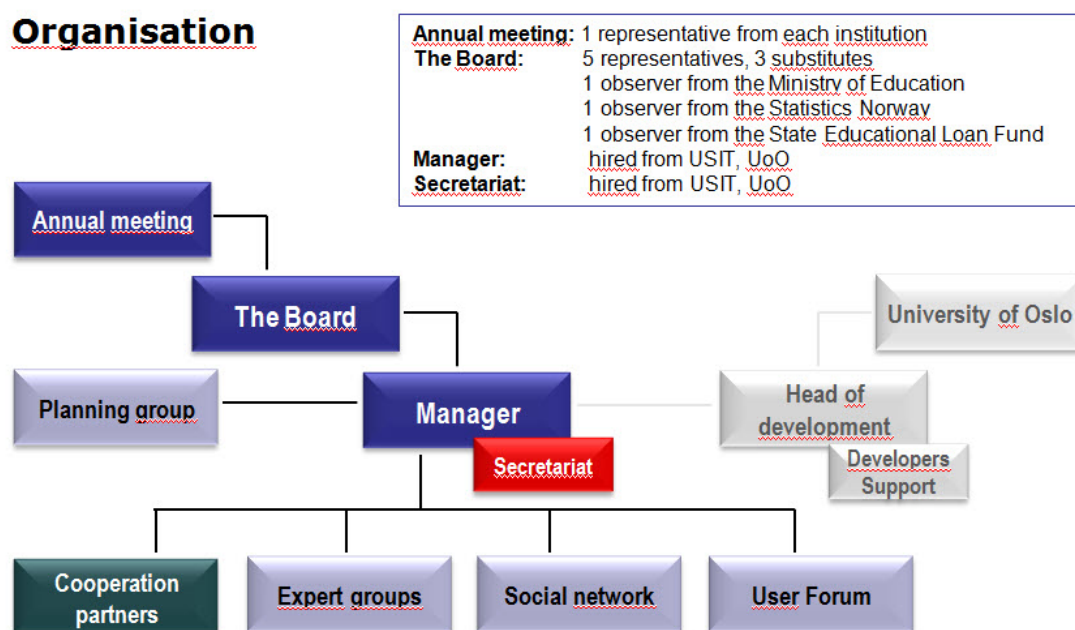


Figure 2: FS – organisation

The FS Consortium participates in Nordforum, which is a meeting place for Scandinavian colleagues (Denmark, Finland, Sweden and Norway).

FS has for many years contributed actively in international standardization and co-operation in order to simplify processes and data exchange in connection with student mobility. This has contributed to the establishment of European standards, which are now also proposed as ISO standards.

Near future

The organisation of FS is being assessed, and coordination with other national systems like the national admission system and Diploma Bank among others, will be evaluated during 2013.

At the moment, the most important work going on is the further digitalisation of the student administration processes at the institutions. The central processes have been streamlined and are quite efficient and are mainly independent of paper. This is not the case for many of the processes local to faculties and institutes. Many steps have been taken to coordinate these to give better system support for the local routines. This includes the total process regarding

student mobility and recognition of external results. The administrative costs per student are significantly higher for exchange students than for domestic students. There are also lots of obstacles that can hinder a student to go abroad. To fulfil some of these tasks, we need international co-operation to exchange digital information. This could be done in groups like RS3G, and by formal standardisation in organisations like CEN and ISO.

A new national recognition registry will be implemented in 2013. The objective for this system is to simplify the procedures for handling foreign credentials, and consider our legal commitments regarding the Lisbon Recognition Convention. Via this national registry, the higher educational institutions and the national agency for quality assurance will be able to share their cases and their enactments. Mainly, the registry will function as a search engine. The primary data source for this new service will be FS.

Another important service that is to be developed is the Diploma Bank.

Diploma Bank

Falsification of diplomas and transcript of records is an increasing problem, and an increasing amount of resources are used to control the documents. Last year, FS developed a specification of the Diploma Bank. The goal for the Diploma Bank is to create a reliable service, where the owner of the results (the student) easily can share his or her results with companies and the educational institutions.

The Diploma Bank will have two main objectives

- To let the owner control the distribution of his or her results
- To give the receiver of the results reliable access to the results

The stakeholders for the solution will be the institution that awards the credits, the student who owns the results and the receiver of the results, like employers, educational institutions, the governmental agencies, and parents among others.

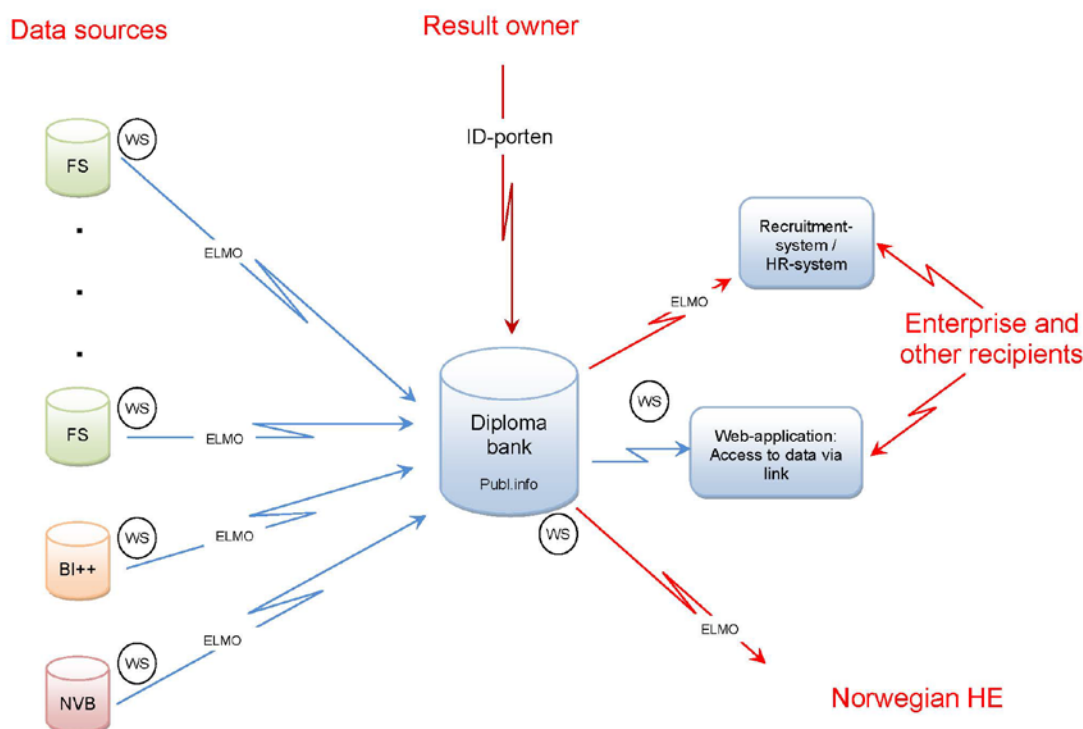


Figure 3: Diploma bank

Figure 3 gives an overview on the Diploma bank. This service will contain a minimum of information to function satisfactory. The information will mainly be collected from each data source (authoritative system) that “owns” the information at the time needed. No results will be stored in the Diploma Bank until somebody needs them. The only information the service will have, is which source have data for which person. The person’s social security number is used to identify the person in each source, and a national id portal will be used to access the service.

When the result owner (the person) chooses to share his or her results, for instance with an employer, educational institution, her/his parents or friends, the Diploma Bank will keep the information for the period of time the results should be accessible, and information about with whom the results are shared. Contact information for the result owner will also be available.

In a future, this service should also be able to share information with comparable foreign services, such as services developed by DUO in Holland and National Student Clearinghouse in USA.